Solar America Initiative
Technology Acceptance Technical Exchange Meeting
San Francisco, CA
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Market Expansion Breakout Group B

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Priority: What are the biggest new opportunities or current activities that we should support? What are the biggest cost-competitive solar applications?

- Focus on energy independence through combining energy efficiency and solar power. Emphasize distributed energy and energy surety.
- Emphasize environmental sustainability.
- Solar thermal is an important current opportunity.
- PV in big-box, non-residential retail markets is an important opportunity.
- Large-scale, central solar stations in a variety of solar types are an important opportunity.
- Seek to combine solar power with new construction projects.
- Engage utilities through their own institutions, and pursue a similar strategy with the building industry institutions such as Nation Association of Homebuilders.
- In the issue of residential solar power, there was much stronger support for new construction vs. retrofitting, though it was agreed that both are important.
- Balance the focus between distributed, small-scale applications and centralized, large-scale applications.
- In the case of centralized, large-scale applications, solar troughs offer the best opportunity.
- General consensus: It is important to focus on all 3 sectors of the solar market: residential rooftops, commercial rooftops, and large-scale power plant generation.

Implementation: Wide vs. Deep—what is the appropriate level of technical assistance effort? What are the appropriate subject areas for technical assistance? What is the best way to engage Building community? What is the best way to engage Utilities?

- Develop data showing value of solar electricity generation to utilities.
- Provide best-practice information to cities about designing solar programs.
- Start by going deep—target areas where there will be significant impact, such as:
    - Air quality—most regional models only consider mobile emissions – need to include stationary emissions, which would then be enhanced by showing reductions in using PV.

    - Reliability—demonstrate reliability so it can be incorporated into business models
    - Asset depreciation—from a utility perspective of a distributed system
- Supply is limited—if we really want to increase markets, work on silicon supply because integrators are getting all the business they can handle.
- Community facility districts which aggregate purchases with homebuilders are an important opportunity (means of engaging building community—aggregated purchases).
- Loan subsidies vs. capital subsidies should be researched—and other economic considerations.
- Provide interactive solar potential mapping for cities.
- Avenues for technical assistance from the Department of Energy program:
    - Provide performance data for existing residential and commercial applications.
    - There is a need for specific design-related technical assistance in crystalline-silicon PV technology. *(This comment may have been incompletely captured during the session.)*
    - There is a need for performance evaluation of innovative technologies in the laboratory and as part of fielded PV systems.
    - Provide design assistance for the consulting industry, which is already integrated with the building industry and the utility industry, etc.
- Intelligent control of mass distributed generation and interface with the grid are important utility concerns which should be addressed.
- Find motivation for installers to try innovative technologies, perhaps by:
    - Risk absorption
    - A Department of Energy "stamp of approval" (this was later replaced by consensus opinion that objective, side-by-side comparisons would be sufficient and appropriate.)
- Large installations are a better market for innovative technologies. Move small-scale laboratory testing success to large-scale production.
- Identify and target new electricity generation needs, caused by regional population growth, etc.
- Facilitate broad public awareness.
- Provide side-by-side objective technical comparisons.

Other Issues for the Department of Energy to Consider?

- Market sustainability over the long term.
- Will this type of market activity give an advantage to overseas competitors?

Round table:

At the end of the session, each participant was asked to provide what they considered to be their most important comment or suggestion:

- The major problem is disconnect between customers, utilities, Public Utilities Commissions, and the lack of a proper tool for design support and codes and standards. The Department of Energy needs to focus on how to be an "information center."
    - Provide tools.
    - Education for public awareness (materials).
    - Help reduce gaps between different players.
    - Work with labs and manufacturers to advance new technologies.
    - Help industries take new products into marketplaces.
- To Do:
    - Solar America City
    - Solar EnergyStar label
    - Solar knowledge base—focus on:
        - Builders
        - Utilities
        - Big box
        - Centralized
- Focus Technology Acceptance and research and development efforts on residential/commercial new construction and central station applications and disseminate the results through builder/utility associations/industry channels.
- Multi-faceted approach to facilitating energy efficiency and renewable energy in residential new construction, including:
    - Technical assistance
    - Market evaluation (of solar communities)
    - Utility impacts/benefits
    - Air quality impacts (Carbon Dioxide, Nitrous Oxides, Sulfur Dioxides)

  Coupled with focused market assistance.
- Implementation: What about architects and building-integrated PV?
  Big Picture: Utility acceptance.
- Subsidize ad campaigns.
  Panel certification.
- There is a need for a centralized clearing house of third-party product comparison data.
- How can the Department of Energy engage customers and customer awareness of PV? Has the Department of Energy looked at other agencies doing the same thing (tools, research, etc.) like Solar Electric Power Association and others? Or the Department of Energy could work to support these agencies.
- What degree of balance will the Department of Energy apply in its Solar America Initiative program between residential, commercial, and central station technologies? Suggestion: Large scale (>50 Megawatts) of solar thermal trough technology support of at least 15% of Fiscal Year 2007 budget.